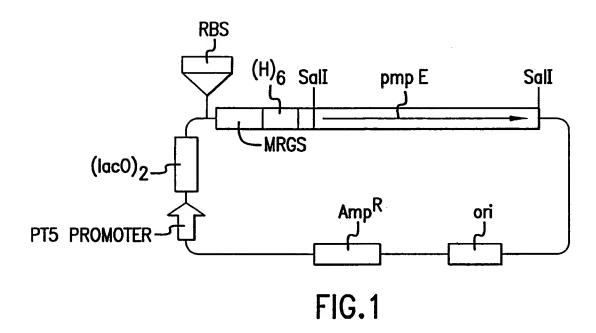
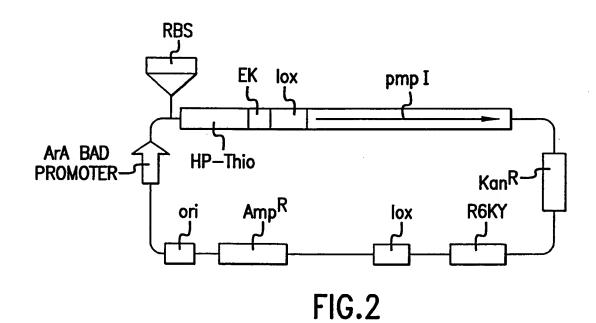
2

Inventor(s): James Jackson Title: "Chlamydia Protein, Gene Sequence and Uses Thereof"





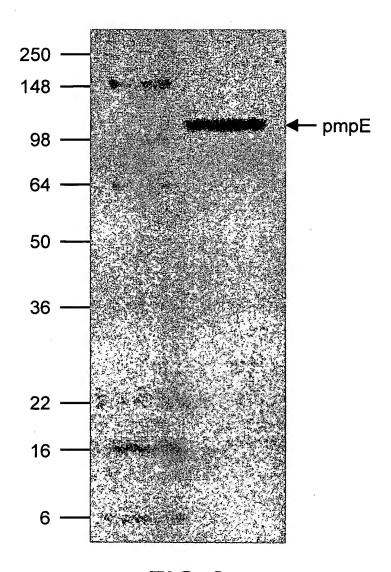


FIG.3

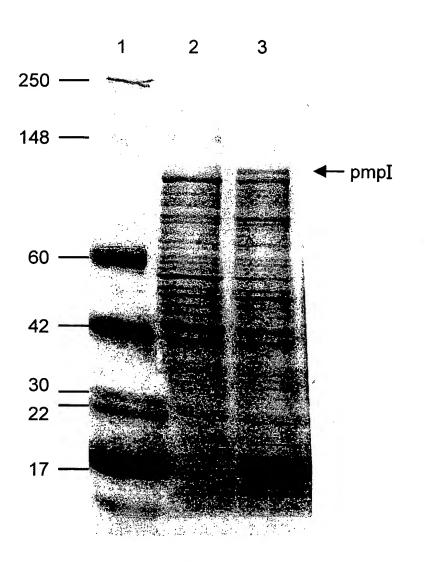


FIG.4

Thi.

							١٠٠٠).	ř
aaa Lys								, \48
gct Ala								96
gat Asp								144
act Thr 50								192
gct Ala								240
gat Asp								288
aaa Lys								336
aat Asn								384
gaa Glu 130								432
get Ala								480
tac Tyr								528
tat Tyr								576

FIG.5A

	aat cag Asn Gli 195													624
act aat Thr Asr 210	aca go Thr Ala	a gga a Gly	aaa Lys	ggt Gly 215	ggc Gly	gct Ala	atc Ile	tat Tyr	gct Ala 220	gga Gly	acg Thr	agc Ser	aat Asn	672
	gag ag Glu Sei													720
	gga gga Gly Gly													768
	aac ato Asn Ile 260	e Val												816
	tct tca Ser Ser 275													864
	gat gti Asp Va													912
	aaa aat Lys Ası													960
	aat ggo Asn Gly													1008
	gct ato Ala Ile 340	: Tyr												1056
	cat gct His Ala 355													1104
	aat ggl Asn Gly													1152

ata aca gta gca agc tcc tct ggt gaa att cta tta gga gca ggg agt 1200 Ile Thr Val Ala Ser Ser Ser Gly Glu Ile Leu Leu Gly Ala Gly Serson 385 390 agc caa aat tta att ttt tat gat cct att gaa gtt agc aat gca ggg 1248 Ser Gln Asn Leu Ile Phe Tyr Asp Pro Ile Glu Val Ser Asn Ala Gly 410 415 gtc tct gtg tcc ttc aat aag gaa gct gat caa aca ggc tct gta gta 1296 Val Ser Val Ser Phe Asn Lys Glu Ala Asp Gln Thr Gly Ser Val Val 420 430 ttt tca gga gct act gtt aat tct gca gat ttt cat caa cgc aat tta 1344 Phe Ser Gly Ala Thr Val Asn Ser Ala Asp Phe His Gln Arg Asn Leu 435 440 caa aca aaa aca cct gca ccc ctt act ctc agt aat ggt ttt cta tgt 1392 Gln Thr Lys Thr Pro Ala Pro Leu Thr Leu Ser Asn Gly Phe Leu Cys 450 455 460 atc gaa gat cat gct cag ctt aca gtg aat cga ttc aca caa act ggg 1440 Ile Glu Asp His Ala Gln Leu Thr Val Asn Arg Phe Thr Gln Thr Gly 465 470 475 480 ggt gtt gtt tct ctt ggg aat gga gca gtt ctg agt tgc tat aaa aat 1488 Gly Val Val Ser Leu Gly Asn Gly Ala Val Leu Ser Cys Tyr Lys Asn 485 490 495 ggt gca gga aat tot gct agc aat gcc tot ata aca otg aag cat att 1536 Gly Ala Gly Asn Ser Ala Ser Asn Ala Ser Ile Thr Leu Lys His Ile 500 505 gga ttg aat ctt tct tcc att ctg aaa agt ggt gct gag att cct tta 1584 Gly Leu Asn Leu Ser Ser Ile Leu Lys Ser Gly Ala Glu Ile Pro Leu 515 520 525 ttg tgg gta gag cct aca aat aac agc aat aac tat aca gca gat act 1632 Leu Trp Val Glu Pro Thr Asn Asn Ser Asn Asn Tyr Thr Ala Asp Thr 530 535 540 gca gct acc ttt tca tta agt gat gta aaa ctc tca ctc att gat gac 1680 Ala Ala Thr Phe Ser Leu Ser Asp Val Lys Leu Ser Leu Ile Asp Asp 545 550 560 555 tat ggg aat tot cot tat gaa too aca gat ota acc cat got otg toa 1728 Tyr Gly Asn Ser Pro Tyr Glu Ser Thr Asp Leu Thr His Ala Leu Ser 570 565 575

FIG.5C

tca cag cct atg cta tct att tct gag gct agt gat aac cag cta aga 1776 Ser Gln Pro Met Leu Ser Ile Ser Glu Ala Ser Asp Asn Gln Leu Arg 580 tct gat gat atg gat ttt tcg gga cta aat gtc cct cat tat gga tgg 1824 Ser Asp Asp Met Asp Phe Ser Gly Leu Asn Val Pro His Tyr Gly Trp 595 600 605 caa gga ctt tgg act tgg ggc tgg gca aaa act caa gat cca gaa cca 1872 Gln Gly Leu Trp Thr Trp Gly Trp Ala Lys Thr Gln Asp Pro Glu Pro 610 615 620 gca tct tca gca aca atc aca gat cca caa aaa gcc aat aga ttc cat 1920 Ala Ser Ser Ala Thr Ile Thr Asp Pro Gln Lys Ala Asn Arg Phe His 630 635 aga acc tta tta ctg act tgg ctt cct gct ggg tat gtt cct agc ccg 1968 Arg Thr Leu Leu Thr Trp Leu Pro Ala Gly Tyr Val Pro Ser Pro 645 650 655 aaa cac aga agt ccc ctc ata gcg aat acc tta tgg ggg aat atg ctg 2016 Lys His Arg Ser Pro Leu Ile Ala Asn Thr Leu Trp Gly Asn Met Leu 660 ctt gca aca gaa agc tta aaa aat agt gca gaa ctg aca cct agt gat 2064 Leu Ala Thr Glu Ser Leu Lys Asn Ser Ala Glu Leu Thr Pro Ser Asp 675 680 cat cct ttc tgg gga att aca gga gga cta ggc atg atg gtt tac 2112 His Pro Phe Trp Gly Ile Thr Gly Gly Gly Leu Gly Met Met Val Tyr 695 caa gat cct cga gaa aat cat cct gga ttc cat atg cgc tct tcc gga 2160 Gln Asp Pro Arg Glu Asn His Pro Gly Phe His Met Arg Ser Ser Gly 705 710 715 720 tac tct gcg ggg atg ata gca ggg cag aca cac acc ttc tca ttg aaa 2208 Tyr Ser Ala Gly Met Ile Ala Gly Gln Thr His Thr Phe Ser Leu Lys 725 **730** 735 ttc agt cag acc tac acc aaa ctc aat gag cgt tac gca aaa aac aac 2256 Phe Ser Gln Thr Tyr Thr Lys Leu Asn Glu Arg Tyr Ala Lys Asn Asn 740 745 750 gta tct tct aaa aat tac tca tgc caa gga gaa atg ctc ttc tca ttg 2304 Val Ser Ser Lys Asn Tyr Ser Cys Gln Gly Glu Met Leu Phe Ser Leu 755 760 765

FIG.5D

caa gaa ggt ttc ttg ctg act aaa tta gtt ggg ctt tac agc tat gga 2352 Gin Glu Gly Phe Leu Leu Thr Lys Leu Val Gly Leu Tyr Ser Tyr Gly 775 780 gac cat aac tgt cac cat ttc tat acc caa gga gaa aat cta aca tct 2400 Asp His Asn Cys His His Phe Tyr Thr Gln Gly Glu Asn Leu Thr Ser 785 **790** 795 800 caa ggg acg ttc cgt agt caa acg atg gga ggt gct gtt ttt ttt gat 2448 Gln Gly Thr Phe Arg Ser Gln Thr Met Gly Gly Ala Val Phe Phe Asp 810 ctc cct atg aaa ccc ttt gga tca acg cat ata ctg aca gct ccc ttt 2496 Leu Pro Met Lys Pro Phe Gly Ser Thr His Ile Leu Thr Ala Pro Phe 820 825 830 tta ggt gct ctt ggt att tat tct agc ctg tct cac ttt act gag gtg 2544 Leu Gly Ala Leu Gly Ile Tyr Ser Ser Leu Ser His Phe Thr Glu Val 835 840 gga gcc tat ccg cga agc ttt tct aca aag act cct ttg atc aat gtc 2592 Gly Ala Tyr Pro Arg Ser Phe Ser Thr Lys Thr Pro Leu Ile Asn Val 855 860 cta gtc cct att gga gtt aaa ggt agc ttt atg aat gct acc caa aga 2640 Leu Val Pro Ile Gly Val Lys Gly Ser Phe Met Asn Ala Thr Gln Arg 865 870 875 880 cct caa gcc tgg act gta gaa ttg gca tac caa ccc gtt ctg tat aga 2688 Pro Gln Ala Trp Thr Val Glu Leu Ala Tyr Gln Pro Val Leu Tyr Arg 885 caa gaa cca ggg atc gcg acc cag ctc cta gcc agt aag ggt att tgg 2736 Gln Glu Pro Gly Ile Ala Thr Gln Leu Leu Ala Ser Lys Gly Ile Trp 900 905 910 ttt ggt agt gga agc ccc tca tcg cgt cat gcc atg tcc tat aaa atc 2784 Phe Gly Ser Gly Ser Pro Ser Ser Arg His Ala Met Ser Tyr Lys Ile 915 920 925 tca cag caa aca caa cct ttg agt tgg tta act ctc cat ttc cag tat 2832 Ser Gln Gln Thr Gln Pro Leu Ser Trp Leu Thr Leu His Phe Gln Tyr 930 935 940 cat gga ttc tac tcc tct tca acc ttc tgt aat tat ctc aat ggg gaa 2880 His Gly Phe Tyr Ser Ser Ser Thr Phe Cys Asn Tyr Leu Agn Gly Glu 945 950 960 att gct ctg cga ttc tag 2898 Ile Ala Leu Arg Phe 965

				_										;-		
atg Met 1	cga Arg	cct Pro	gat Asp	cat His 5	atg Met	aac Asn	ttc Phe	tgt Cys	tgt Cys 10	cta Leu	tgt Cys	get Ala	gct Ala	att Ile 15	ttg Leu	48
tca Ser	tcc Ser	aca Thr	gcg Ala 20	gtc Val	ctc Leu	ttt Phe	ggc Gly	cag Gln 25	gat Asp	ccc Pro	tta Leu	ggt Gly	gaa Glu 30	acc Thr	gcc Ala	96
ctc Leu	ctc Leu	act Thr 35	aaa Lys	aat Asn	cct Pro	aat Asn	cat His 40	gtc Val	gtc Val	tgt Cys	aca Thr	ttt Phe 45	ttt Phe	gag Glu	gac Asp	144
tgt Cys	acc Thr 50	atg Met	gag Glu	agc Ser	ctc Leu	ttt Phe 55	cct Pro	gct Ala	ctt Leu	tgt Cys	gct Ala 60	cat His	gca Ala	tca Ser	caa G1n	192
gac Asp 65	gat Asp	cct Pro	ttg Leu	tat Tyr	gta Val 70	ctt Leu	gga Gly	aat Asn	tcc Ser	tac Tyr 75	tgt Cys	tgg Trp	ttc Phe	gta Val	tct Ser 80	240
aaa Lys	ctc Leu	cat His	atc Ile	acg Thr 85	gac Asp	ccc Pro	aaa Lys	gag Glu	gct Ala 90	ctt Leu	ttt Phe	aaa Lys	gaa Glu	aaa Lys 95	gga Gly	288
gat Asp	ctt Leu	tcc Ser	att Ile 100	caa G1n	aac Asn	ttt Phe	cgc Arg	ttc Phe 105	ctt Leu	tcc Ser	ttc Phe	aca Thr	gat Asp 110	tgc Cys	tct Ser	336
tcc Ser	aag Lys	gaa Glu 115	agc Ser	tct Ser	cct Pro	tct Ser	att Ile 120	att Ile	cat His	caa G1n	aag Lys	aat Asn 125	ggt Gly	cag G1n	tta Leu	384
tcc Ser	ttg Leu 130	cgc Arg	aat Asn	aat Asn	ggt Gly	agc Ser 135	atg Met	agt Ser	ttc Phe	tgt Cys	cga Arg 140	aat Asn	cat His	gct Ala	gaa Glu	432
ggc Gly 145	tct Ser	gga Gly	gga Gly	gcc Ala	atc Ile 150	tct Ser	gcg Ala	gat Asp	gcc Ala	ttt Phe 155	tct Ser	cta Leu	cag G1n	cac His	aac Asn 160	480
tat Tyr	ctt Leu	ttc Phe	aca Thr	gct Ala 165	ttt Phe	gaa Glu	gag Glu	aat Asn	tct Ser 170	tct Ser	aaa Lys	gga Gly	aat Asn	ggc Gly 175	gga Gly	528
					acc Thr											576

FIG.6A

tct ttc gcc cgt aat cgt gcg gat tta aat ggc ggc gct att tgc tgt Ser Phe Ala Arg Asn Arg Ala Asp Leu Asn Gly Gly Ala Ile Cys Cys 195 200 205 agt aat ctt att tgt tca ggg aat gta aac cct ctc ttt ttc act gga 672 Ser Asn Leu Ile Cys Ser Gly Asn Val Asn Pro Leu Phe Phe Thr Gly 210 215 220 aac tcc gcc acg aat gga ggc gct att tgt tgt atc agc gat cta aac Asn Ser Ala Thr Asn Gly Gly Ala Ile Cys Cys Ile Ser Asp Leu Asn 225 230 235 240 acc tca gaa aaa ggc tct ctc tct ctt gct tgt aac caa gaa acg cta 768 Thr Ser Glu Lys Gly Ser Leu Ser Leu Ala Cys Asn Gln Glu Thr Leu 250 255 ttt gca agc aat tct gct aaa gaa aaa ggc ggg gct att tat gcc aag 816 Phe Ala Ser Asn Ser Ala Lys Glu Lys Gly Gly Ala Ile Tyr Ala Lys 260 265 270 cac atg gta ttg cgt tat aac ggt cct gtt tcc ttc att aac aac agc 864 His Met Val Leu Arg Tyr Asn Gly Pro Val Ser Phe Ile Asn Asn Ser 275 280 gct aaa ata ggt gga gct atc gcc atc cag tcc gga ggg agt ctc tct Ala Lys Ile Gly Gly Ala Ile Ala Ile Gln Ser Gly Gly Ser Leu Ser 290 295 300 atc ctt gca ggt gaa gga tct gtt ctg ttc cag aat aac tcc caa cgc Ile Leu Ala Gly Glu Gly Ser Val Leu Phe Gln Asn Asn Ser Gln Arg 305 310 315 acc tcc gac caa ggt cta gta aga aac gcc atc cac tta gag aaa gat 1008 Thr Ser Asp Gln Gly Leu Val Arg Asn Ala Ile Tyr Leu Glu Lys Asp 325 330 335 gcg att ctt tcc tta gaa gct cgc aac gga gat att ctt ttc ttt 1056 Ala Ile Leu Ser Ser Leu Glu Ala Arg Asn Gly Asp Ile Leu Phe Phe 340 345 gat cct att gta caa gaa agt agc agc aaa gaa tcg cct ctt ccc tcc 1104 Asp Pro Ile Val Glu Ser Ser Ser Lys Glu Ser Pro Leu Pro Ser 355 360 365 tet ttg caa gee age gtg act tet eee ace eea gee ace gea tet eet 1152 Ser Leu Gln Ala Ser Val Thr Ser Pro Thr Pro Ala Thr Ala Ser Pro 370 375 380

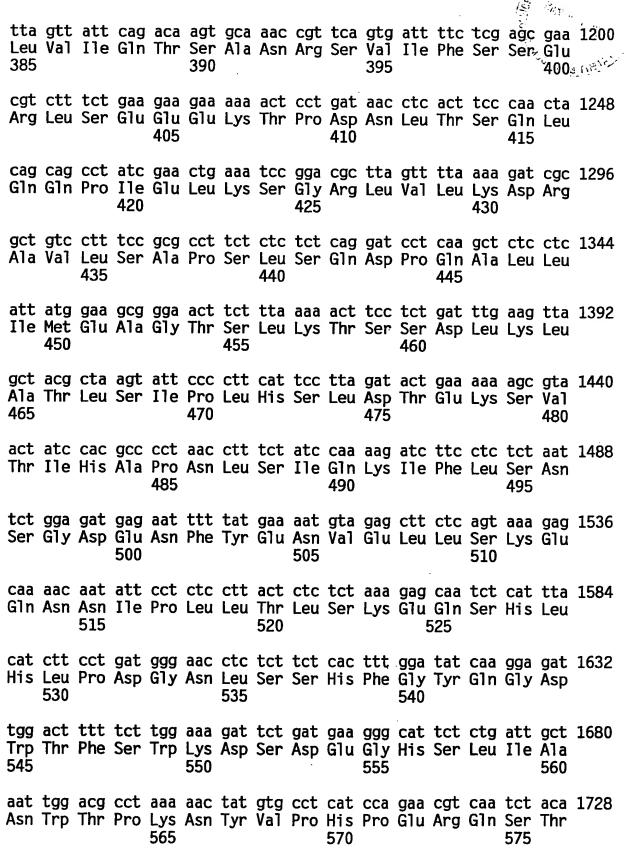


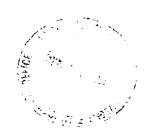
FIG.6C

ctc gtt gcg aac act ctt tgg aac acc tat tcc gat atg caa gct gtg 1776 Leu Val Ala Asn Thr Leu Trp Asn Thr Tyr Ser Asp Met Gln Ala Val 580 585 590 cag tcg atg att aat aca ata gcg cac gga gga gcc tat cta ttt gga 1824 Gln Ser Met Ile Asn Thr Ile Ala His Gly Gly Ala Tyr Leu Phe Gly 600 605 acg tgg gga tct gct gtt tct aat tta ttc tat gct cac gac agc tct 1872 Thr Trp Gly Ser Ala Val Ser Asn Leu Phe Tyr Ala His Asp Ser Ser 610 615 ggg aaa cct atc gat aat tgg cat cat aga agc ctt ggc tac cta ttc 1920 Gly Lys Pro Ile Asp Asn Trp His His Arg Ser Leu Gly Tyr Leu Phe 625 630 635 ggt atc agt act cac agt tta gat gac cat tct ttc tgc ttg gct gca 1968 Gly Ile Ser Thr His Ser Leu Asp Asp His Ser Phe Cys Leu Ala Ala 645 650 gga caa tta ctc ggg aaa tcg tcc gat tcc ttt att acg tct aca gaa 2016 Gly Gln Leu Leu Gly Lys Ser Ser Asp Ser Phe Ile Thr Ser Thr Glu 665 acg acc tcc tat ata gct act gta caa gcg caa ctc gct acc tct cta 2064 Thr Thr Ser Tyr Ile Ala Thr Val Gln Ala Gln Leu Ala Thr Ser Leu 675 680 685 atg aaa atc tct gca cag gca tgc tac aat gaa agt atc cat gag cta 2112 Met Lys Ile Ser Ala Gln Ala Cys Tyr Asn Glu Ser Ile His Glu Leu 690 695 700 aaa aca aaa tat cgc tcc ttc tct aaa gaa gga ttc gga tcc tgg cat 2160 Lys Thr Lys Tyr Arg Ser Phe Ser Lys Glu Gly Phe Gly Ser Trp His 705 710 715 720 agc gtt gca gta tcc gga gaa gtg tgc gca tcg att cct att gta tcc 2208 Ser Val Ala Val Ser Gly Glu Val Cys Ala Ser Ile Pro Ile Val Ser 725 730 735 aat ggt tcc gga ctg ttc agc tcc ttc tct att ttc tct aaa ctg caa 2256 Asn Gly Ser Gly Leu Phe Ser Ser Phe Ser Ile Phe Ser Lys Leu Gln 740 745 **750** gga ttt tca gga aca cag gac ggt ttt gag gag agt tcg gga gag att 2304 Gly Phe Ser Gly Thr Gln Asp Gly Phe Glu Glu Ser Ser Gly Glu Ile **755** 760 765

FIG.6D

cgg Arg	tcc Ser 770	ttt Phe	tct Ser	gcc Ala	agc Ser	tct Ser 775	ttc Phe	aga Arg	aat Asn	att Ile	tca Ser 780	ctt Leu	cct Pro	ata Ile	gga Gly	2352
ata Ile 785	aca Thr	ttt Phe	gaa Glu	aaa Lys	aaa Lys 790	tcc Ser	caa Gln	aaa Lys	aca Thr	cga Arg 795	acc Thr	tac Tyr	tat Tyr	tac Tyr	ttt Phe 800	2400
cta Leu	gga Gly	gcc Ala	tac Tyr	atc Ile 805	caa G1n	gac Asp	ctg Leu	aaa Lys	cgt Arg 810	gat Asp	gtg Val	gaa Glu	tcg Ser	gga Gly 815	cct Pro	2448
gta Val	gtg Val	tta Leu	ctc Leu 820	aaa Lys	aat Asn	gcc Ala	gtc Val	tcc Ser 825	tgg Trp	gat Asp	gct Ala	cct Pro	atg Met 830	gcg Ala	aac Asn	2496
ttg Leu	gat Asp	tca Ser 835	cga Arg	gcc Ala	tac Tyr	atg Met	ttc Phe 840	agg Arg	ctt Leu	acg Thr	aat Asn	caa G1n 845	aga Arg	gct Ala	cta Leu	2544
cac His	aga Arg 850	ctt Leu	cag G1n	acg Thr	ctg Leu	tta Leu 855	aat Asn	gtg Val	tct Ser	tgt Cys	gtg Val 860	ctg Leu	cgt Arg	ggg Gly	caa G1n	2592
					ctg Leu 870											2634
tag																2637

FIG.6E





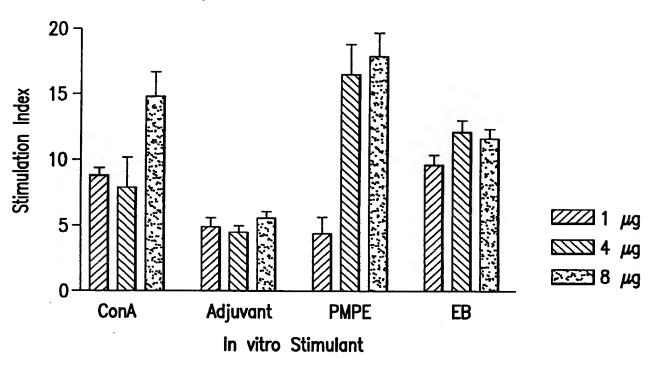


FIG.7